



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,759	07/22/2003	Ji-Rong Wen	MS1-1617US	6470
22801	7590	03/21/2007		
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			EXAMINER AHN, SANGWOO	
			ART UNIT	PAPER NUMBER
			2166	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/21/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/21/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhptoms@leehayes.com

Office Action Summary

Application No.

10/624,759

Applicant(s)

WEN ET AL.

Examiner

Sangwoo Ahn

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 9, 11 - 20, 22 - 24, 26, 28 - 31 and 33 - 49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 9, 11 - 20, 22 - 24, 26, 28 - 31 and 33 - 49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/5/2007 has been entered.

Response to Amendment

Claims 1 – 9, 11 – 20, 22 – 24, 26, 28 – 31 and 33 – 49 are pending in this Office Action.

Claims 1, 9, 11 – 12, 20, 22, 28 – 29, 33, 38 and 44 have been amended.

Claims 10, 21, 25, 27 and 32 have been canceled.

Claims 45 – 49 have been added.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 20, 33, 38 and 44, and their dependent claims are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 1 and its dependent claims, the claims are rejected as falling under the judicial exception of an abstract idea which lacks a useful, concrete, and tangible result. A claimed series of steps or acts that do not result in a useful, concrete, and tangible result are not statutory within the meaning of 35 USC 101. In the instant case, the claims recite "identifying," and "expanding." However, no useful, concrete, and tangible result is claimed. For example, "writing said data," "storing said data," "displaying said data" being claimed at the end of the claim may comprise a useful, concrete, and tangible result. Absent such a result, however, the claims are not statutory.

Regarding claim 20 and its dependent claims, the claims fail to place the invention squarely within one statutory class of invention. On page 28 line 24 – page 29 line 8 of the instant specification, applicant has provided evidence that applicant intends the "computer readable media" to include signals. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore these claims are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

Regarding claim 33 and its dependent claims, the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such,

Art Unit: 2166

they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Regarding claim 38 and its dependent claims, the claims are rejected as falling under the judicial exception of an abstract idea which lacks a useful, concrete, and tangible result. A claimed series of steps or acts that do not result in a useful, concrete, and tangible result are not statutory within the meaning of 35 USC 101. In the instant case, the claims recite "grouping," and "instantiating." However, no useful, concrete, and tangible result is claimed. For example, "writing said data," "storing said data," "displaying said data" being claimed at the end of the claim may comprise a useful, concrete, and tangible result. Absent such a result, however, the claims are not statutory.

Regarding claim 44, the claim fails to place the invention squarely within one statutory class of invention. On page 28 line 24 – page 29 line 8 of the instant specification, applicant has provided evidence that applicant intends the "computer readable media" to include signals. As such, the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore these claims are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article or object and as such is not a machine or manufacture. Energy is not a combination of substances and therefore not a composition of matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 – 15, 18 – 27, 29 – 37 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Number 6,457,028 issued to James E. Pitkow et al (hereinafter “Pitkow”)

Regarding claim 1, Pitkow discloses,

A computerized method comprising:

identifying, from a plurality of objects, a set of core objects for a data structure corresponding to a community of objects (Figure 2 elements 201 – 205, column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.) by identifying one or more objects that are referenced by at least a threshold number of other objects of the plurality of objects (column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8 lines 18 – 22, et seq.); and

expanding, based on the set of core objects, the data structure corresponding to the community of objects to include a set of affiliated objects (Figure 2 elements 206 – 207; generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose

Art Unit: 2166

elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, et seq.).

Regarding claim 2, Pitkow discloses,

repeating the identifying and expanding for a plurality of communities of objects, wherein the objects in each community of objects are all from the plurality of objects (column 6 lines 5 – 8, et seq.).

Regarding claim 3, Pitkow discloses,

merging together a first community of the plurality of communities and a second community of the plurality of communities if there is sufficient similarity between the core objects in the first community and the core objects in the second community, wherein the merging results in a merged community including all of the objects of the first community and the second community and having a set of core objects that includes the core objects in the first community and the core objects in the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 4, Pitkow discloses,

merging together a first community of the plurality of communities and a second community of the plurality of communities if there is sufficient similarity between the core and affiliated objects in the first community and the core and affiliated objects in the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 67, column 8 lines 15 – 28, column 10 line 15, et seq.).

Regarding claim 5, Pitkow discloses,

identifying a first community of the plurality of communities and a second community of the plurality of communities; determining whether the first community and second community satisfy one or more constraints; and merging the first community and the second community if the one or more constraints are satisfied, wherein the merging results in a merged community including all of the objects of the first community and the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 6, Pitkow discloses,

one of the plurality of objects is one of the set of core objects for the community of objects, and is one of the set of affiliated objects for another community of objects (column 5 line 64 – column 6 line 1, column 10 lines 15; 26 – 30, et seq.).

Regarding claim 7, Pitkow discloses,

one of the plurality of objects is one of the set of core objects for multiple communities (column 9 lines 40 – 50, et seq.).

Regarding claim 8, Pitkow discloses,

one of the plurality of objects is one of the set of affiliated objects for multiple communities (column 9 lines 40 – 50, column 10 lines 26 – 30, et seq.).

Regarding claim 9, Pitkow discloses,

identifying the set of core objects for the community comprises:

identifying links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

Art Unit: 2166

finding groups of objects of the plurality of objects that satisfy a link threshold (column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identifying, as a core set, one or more of the groups of objects that satisfy the link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 11, Pitkow discloses,

expanding the data structure corresponding to the community of objects comprises:

identifying links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

identifying one or more objects of the plurality of objects, wherein a link exists from each of the identified one or more objects to at least one of the core objects of the set of core objects (Figure 5, column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8 lines 18 – 22, column 10 lines 25 – 30, et seq.); and

including, in the set of affiliated objects, each of the identified one or more objects (Figure 5, column 10 lines 25 – 30, Figure 2 elements 206 – 207, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1, column 7 lines 8 – 10, et seq.).

Regarding claim 13, Pitkow discloses,

ranking each affiliated object in the set of affiliated objects in accordance with the number of links from the affiliated object to core objects of the set of core objects, wherein affiliated objects having a larger number of links to core objects have higher rankings (column 10 lines 32 – 38, et seq.).

Art Unit: 2166

Regarding claim 14, Pitkow discloses,

each of the plurality of objects comprises a document (Figure 5, et seq.).

Regarding claim 15, Pitkow discloses,

identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a citation in one document to another document (Figure 5, column 5 lines 3 – 7, et seq.).

Regarding claim 18, Pitkow discloses,

each of the plurality of objects comprises a web page (column 4 lines 15 – 19, column 5 lines 1 – 7, et seq.).

Regarding claim 19, Pitkow discloses,

identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a hyperlink in one web page to another web page (column 5 lines 1 – 3, et seq.).

Regarding claim 20, Pitkow discloses,

One or more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors of a device, causes the one or more processors to, at least:

identify, from a plurality of objects, a first collection of objects to be core objects of a community (Figure 2 elements 201 – 205, column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.) by identifying one or more objects that are referenced by at least a threshold number of other objects of the plurality of objects (column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8 lines 18 – 22, et seq.);

Art Unit: 2166

identify, from the plurality of objects, a second collection of objects that are linked to the first collection of objects to be affiliate objects of the community ; and

add, to a data structure corresponding to the community, the first collection of objects; and

add, to the data structure corresponding to the community, the second collection of objects (Figure 2 elements 206 – 207: generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, et seq.).

Regarding claim 22, Pitkow discloses,

the plurality of instructions, when executed by the one or more processors, further cause the one or more processors to, at least:

identify, from the plurality of objects, additional first collections of objects to be core objects of additional communities (Figure 2 elements 201 – 205, column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.);

identify, from the plurality of objects, additional second collections of objects that are linked to the first collections of objects to be affiliated objects of the additional communities;

add, to data structures corresponding to the additional communities, respective additional first collections of objects; and

add, to the data structures corresponding to the additional communities, the respective additional second collections of objects (Figure 2 elements 206 – 207: generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, column 6 lines 5 – 6, et seq.).

Regarding claim 23, Pitkow discloses,

merge together a first of the communities and a second of the communities if there is sufficient similarity between the core objects in the first of the communities and the core objects in the second of the communities, wherein the merge results in a merged community including all of the objects of the first of the communities and the second of the communities and having a set of core objects that includes the core objects in the first of the communities and the core objects in the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 24, Pitkow discloses,

merge together a first of the communities and a second of the communities if there is sufficient similarity between the core and affiliated objects in the first of the communities and the core and affiliated objects in the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 67, column 8 lines 15 – 28, column 10 line 15, et seq.).

Regarding claim 26, Pitkow discloses,

the link threshold comprises a minimum number of objects in the plurality of objects that must each link to each object in the group (column 7 lines 56 – 58, et seq.).

Regarding claim 29, Pitkow discloses,

A system to mine communities from a plurality of objects, the system comprising:

a processor; and

a memory coupled to the processor, wherein the memory includes one or more instructions that cause the processor to, at least:

identify, from the plurality of objects, one or more core object sets from the plurality of objects, wherein each core object set is a core of a community (Figure 2 elements 201 – 205, column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.) by identifying one or more objects that are referenced by at least a threshold number of other objects of the plurality of objects, wherein each core object set is incorporated into a data structure defining a community (column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8 lines 18 – 22, et seq.); and

for each of the core object sets, expand the data structure defining the community to include a set of affiliated objects, wherein the expansion is based on the core object set of the community (Figure 2 elements 206 – 207: generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, et seq.).

Art Unit: 2166

Regarding claim 30, Pitkow discloses,
repeat the identifying and expanding for a plurality of communities of objects,
wherein the objects in each community of objects are all from the plurality of objects
(column 3 lines 1 – 26, column 5 lines 54 – 61, et seq.).

Regarding claim 31, Pitkow discloses,
identify links between objects of the plurality of objects (column 1 lines 30 – 34,
column 3 lines 1 – 3, et seq.);

find groups of objects of the plurality of objects that satisfy a link threshold
(column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identify, as a core set, one or more of the groups of objects that satisfy the link
threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

identify, as a core object set, one or more of the groups of objects that satisfy the
link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 33, Pitkow discloses,

A system implemented at least in part in a computing device, the system
comprising:

a core set identification module to identify core sets of objects for data structures
corresponding to communities from a plurality of objects (Figure 2 elements 201 – 205,
column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.) by identifying one or more objects
that are referenced by at least a threshold number of other objects of the plurality of
objects (column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8
lines 18 – 22, et seq.); and

a community expansion module to expand the data structures corresponding to the communities by adding sets of affiliated objects to data structures corresponding to the communities, wherein the expansion is based at least in part on at least one core set of objects (Figure 2 elements 206 – 207: generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, et seq.).

Regarding claim 34, Pitkow discloses,

identify links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

find groups of objects of the plurality of objects that satisfy a link threshold (column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identify, as a core object set, one or more of the groups of objects that satisfy the link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 35, Pitkow discloses,

identify links between objects of the plurality of objects; and

for each community,

identify one or more objects of the plurality of objects, wherein a link exists from each of the identified one or more objects to at least one of the objects of the core object set of the community (Figure 5, column 10 lines 25 – 30, et seq.), and

include, in the set of affiliated objects of the community, each of the identified one or more objects (Figure 5, column 10 lines 25 – 30, Figure 2 elements 206 – 207, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1, column 7 lines 8 – 10, et seq.).

Regarding claim 36, Pitkow discloses,

a core set merging module to merge together a first of the communities and a second of the communities if there is sufficient similarity between the core objects in the first of the communities and the core objects in the second of the communities, wherein the core set merging module generates a merged community that includes all of the objects of the first of the communities and the second of the communities and has a set of core objects that includes the core objects from the first of the communities and the core objects from the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 37, Pitkow discloses,

a community merging module to merge together a first of the communities and a second of the communities if there is sufficient similarity between the core and affiliated objects of the first of the communities and the core and affiliated objects of the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 67, column 8 lines 15 – 28, column 10 line 15, et seq.).

Regarding claim 45, Pitkow discloses,

each reference is associated with a weight corresponding to a reference type (column 3 lines 9 – 11, column 5 lines 55 – 59, et seq.).

Art Unit: 2166

Regarding claim 46, Pitkow discloses,

each weight corresponds to a numeric value (column 3 lines 9 – 11, column 5 lines 55 – 59, column 7 lines 57 – 65, et seq.); and

the threshold number is a function of, at least, the numeric value corresponding to the weight associated with at least one reference (column 5 lines 55 – 59, et seq.).

Regarding claim 47, Pitkow discloses,

each weight corresponds to a numeric value (column 3 lines 9 – 11, column 5 lines 55 – 59, column 7 lines 57 – 65, et seq.); and

each object in the community is ranked as a function of, at least, the numeric value corresponding to the weight associated with at least one reference to the object (column 10 lines 32 – 45, et seq.).

Regarding claim 48, Pitkow discloses,

the set of core objects;

the set of affiliated objects; and

a programmatic function for measuring a degree of affiliation between two objects of the community based on, at least, the weight associated with at least one reference in a reference chain between the two objects (column 3 lines 9 – 11, column 5 lines 55 – 59, column 7 lines 57 – 65, column 10 lines 32 – 45, et seq.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2166

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitkow in view of U.S. Publication Number 2006/0031246 issued to Loren P. Grayson (hereinafter "Grayson").

Regarding claim 16, Pitkow discloses the method of claim 1 as discussed above under 102-rejection section.

Pitkow does not explicitly disclose each of the plurality of objects comprises a person.

However, Grayson discloses each of the plurality of objects being a person (Figure 21, paragraph 358, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because the combination of the two methods would have provided a system capable of modeling and presenting data of all relationships in a form that supports any data (paragraphs 28 – 29).

Regarding claim 17, Grayson discloses identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a relationship of one person to another person (Figure 21, paragraph 358, et seq.).

Claims 12, 28 and 38 - 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitkow in view of U.S. Publication Number 2002/0152222 issued to David M. Holbrook (hereinafter "Holbrook").

Regarding claim 12, Pitkow discloses the method as recited in claim 11 as discussed under 102-rejection section.

Pitkow does not explicitly disclose assigning a collection of objects to a center portion of a graphics-independent model and another collection of objects to a particular concentric portion around the center in accordance with the rank of the object.

However, Holbrook discloses assigning a collection of objects to a center portion of a graphics-independent model and another collection of objects to a particular concentric portion around the center in accordance with the rank of the object (Figure 4, paragraph 77: the examiner would also like to note that the arrangement of objects shown in Figure 4 supports the inherent data organization in the data structure since, without the underlying data structure organized in the way displayed to the user, the display of the categorized objects in concentric circles could not be achieved. Just because the objects are displayed in a certain way, it does not suggest that they are graphics-dependent, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Regarding claim 28, Pitkow discloses the method as recited in claim 20 as discussed under 102-rejection section.

Pitkow does not explicitly disclose assigning a collection of objects to a center portion of a graphics-independent model and another collection of objects to a particular concentric portion around the center in accordance with the rank of the object.

However, Holbrook discloses assigning a collection of objects to a center portion of a graphics-independent model and another collection of objects to a particular concentric portion around the center in accordance with the rank of the object (Figure 4, paragraph 77: the examiner would also like to note that the arrangement of objects shown in Figure 4 supports the inherent data organization in the data structure since, without the underlying data structure organized in the way displayed to the user, the display of the categorized objects in concentric circles could not be achieved. Just because the objects are displayed in a certain way, it does not suggest that they are graphics-dependent, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Regarding claim 38, Pitkow discloses grouping a first collection of a plurality of objects (column 11 line 3: source site, et seq.), grouping a second collection of the plurality of objects (column 11 line 7: destination site, et seq.), and identifying, as the community of objects, the groupings of the first and second collections of the objects (column 10 lines 24 – 30, et seq.).

Pitkow does not explicitly disclose grouping the collection of objects into a center portion and into one or more concentric portions.

However, Holbrook discloses assigning a collection of objects to a center portion of a graphics-independent model and another collection of objects to a particular

Art Unit: 2166

concentric portion around the center in accordance with the rank of the object (Figure 4, paragraph 77: the examiner would also like to note that the arrangement of objects shown in Figure 4 supports the inherent data organization in the data structure since, without the underlying data structure organized in the way displayed to the user, the display of the categorized objects in concentric circles could not be achieved. Just because the objects are displayed in a certain way, it does not suggest that they are graphics-dependent, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Regarding claim 39, Holbrook discloses both the center portion and the plurality of concentric portions collectively are a set of concentric circles (Figure 4, et seq.).

Regarding claim 40, Holbrook discloses the center portion comprises a circle (Figure 4, et seq.)

Regarding claim 41, Holbrook discloses the each of the plurality of concentric portions comprises a circle (Figure 4, et seq.).

Regarding claim 42, Pitkow discloses the first collection of the objects comprises a core set of objects (column 10 lines 24 – 30, column 11 lines 13 – 14, et seq.).

Regarding claim 43, Pitkow discloses each object of the second collection of the objects comprises an affiliated object (column 10 lines 24 – 30, column 11 lines 13 – 14, et seq.).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pitkow in view of U.S. Patent Number 6,564,206 issued to Kazuyo Ikeda (hereinafter "Ikeda").

Regarding claim 44, Pitkow discloses one of more computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors of a device, causes the one or more processors to describe a community of objects by, at least: assigning a group of core objects of the community (Figure 1, column 3 lines 1 – 5, column 5 lines 54 – 58, et seq.); and assigning a group of affiliated objects of the community (Figure 6, column 3 lines 5 – 12, column 5 lines 54 – 61, column 7 lines 8 – 10, et seq.).

Pitkow does not explicitly disclose assigning a collection of objects to the center data circle and another collection of objects to a plurality of data circles of the set of concentric data circles wherein all of the objects having a same rank are assigned to a same one of the set of concentric data circles.

However, Ikeda discloses assigning a collection of objects to the center data circle and another collection of objects to a plurality of data circles of the set of concentric data circles wherein all of the objects having a same rank are assigned to a same one of the set of concentric data circles (Figure 6, column 23 line 56 – column 24 line 22, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Ikeda's assignment method would have enabled Pitkow's system to arrange a plurality of information in correspondence with the distribution of matching levels or relevancy (column 1 lines 40 – 50, et seq.)

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pitkow in view of U.S. Patent Number 6,349,296 issued to Andrei Z. Broder et al. (hereinafter "Broder").

Regarding claim 49, Pitkow discloses the computerized method of claim 29, at least two core object sets identified from the plurality of objects, and merging of the core object sets based on a condition (these features have been discussed under 102-rejection section).

Pitkow does not explicitly disclose the notion of a ratio of a minimum size of one of the at least two core objects set to a size of an intersection of the at least two core object sets.

However, Broder discloses the notion of a ratio of a minimum size of one of the at least two core objects set to a size of an intersection of the at least two core object sets (column 4 lines 12 – 14; 26 – 56, et seq.). At the time of the present invention, it would have been obvious to a person of ordinary skill in the data processing art to combine the two references since Broder's method would have enabled Pitkow's system for efficient memory operations (less storage and less processing time) by determining when the resemblance of data sets is above a certain threshold.

Art Unit: 2166

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sangwoo Ahn whose telephone number is (571) 272-5626. The examiner can normally be reached on M-F 10-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner Sangwoo Ahn
AU 2166

3/14/2007 SW


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER